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Ontario Ministry of the Environment, Conservation and Parks  
135 St. Clair West, 1<sup>st</sup> Floor  
Toronto, ON  
[waterpolicy@ontario.ca](mailto:waterpolicy@ontario.ca)

*Submitted Online via Environmental Registry of Ontario (ERO) website*

**RE: Updating Ontario's Water Quantity Management Framework (ERO # 019-1340)**

Thank you for the opportunity to provide comments on the Provincial proposal to update Ontario's Water Quantity Management Framework. On June 18, 2020, the Ministry of the Environment, Conservation and Parks (MECP) released a policy proposal paper on the Environmental Registry (ERO # 019-1340) recommending regulatory changes for managing water takings to protect the long-term sustainability of surface water and groundwater and to ensure these important resources are responsibly managed and safeguarded now and for future generations.

The public comment period for the proposed changes is open until August 2, 2020. The proposal paper and supporting material can be found on the Environmental Registry of Ontario (<https://ero.ontario.ca/notice/019-1340>).

In the policy proposal the MECP identifies four goals and desired outcomes the Ministry is aiming to achieve:

Goal	Desired Outcome
<b>Goal 1:</b> Establish clear provincial priorities of water use	Increased transparency so the public and water takers can learn about the criteria the ministry considers in water taking decisions to resolve situations where there are competing demands for water. Clearer and consistent direction on when and how priorities are considered and applied.

Goal	Desired Outcome
<b>Goal 2:</b> Update our approach to managing water takings in stressed areas	More proactive measures to manage water takings based on assessments and circumstances within an area, including for managing drought.
<b>Goal 3:</b> Make water taking data more accessible	Greater access to water quantity data for water managers and the public. Increased water literacy in Ontario.
<b>Goal 4:</b> Give host municipalities more input into water bottling decisions	More say by municipalities before proposed new or expanded water takings for water bottling are considered in their jurisdiction.

The Grand River Conservation Authority (GRCA) strongly supports updating Ontario’s Water Quantity Management Framework to enhance the protection of and ensure the sustainability of the quantity of surface water and groundwater, specifically in areas where water constraints and/or conflicts are identified.

An overarching goal of updating the Water Quantity Management Framework should be to enable *proactive water management planning*, specifically in water quantity stressed areas. Individual case by case assessments of water taking applications in these areas is insufficient. Area based water quantity management is key to identify and resolve potential conflicts and cumulative impacts proactively to avoid over allocation or conflicts.

An important component of *proactive water management planning* is for the MECP to recognize municipal water supply master planning studies when issuing Permits To Take Water (PTTW). Water Supply Master Plans (WSMP) identify municipal water supply needs as a result of longer term population growth (25-50 year time horizon) determined through the Places to Grow Act. These longer-term municipal water supply needs must be considered in overall water management planning. The MECP’s recognition of WSMPs can be achieved by including in regulation that completed Environmental Assessments, i.e., WSMP, must be considered when making PTTW decisions.

There are numerous, well known water quantity issues in the Grand River watershed and more broadly, in the Lake Erie Source Protection Area. Examples include areas with conflicts/constraints between irrigation demand and environmental flow needs, in areas of the Norfolk Sand Plains including the Whitemans Creek subwatershed.

Over time in the Grand River watershed, water management issues have risen in various forms such as concerns with environmental flow needs, municipal water

security, and the cumulative impacts of below water table aggregate extraction. Attempts to address these specific issues have been documented in a number of reports (attached) over the last few years and decades; however, ultimately they require provincial involvement/direction:

- Grand River Watershed Water Management Plan. Prepared by the Project Team, Water Management Plan. Grand River Conservation Authority, Cambridge, ON. 2014 [https://www.grandriver.ca/en/our-watershed/resources/Documents/WMP/Water\\_WMP\\_Plan\\_Complete.pdf](https://www.grandriver.ca/en/our-watershed/resources/Documents/WMP/Water_WMP_Plan_Complete.pdf)
- Low Flow Reliabilities in Regulated River Reaches in the Grand River Watershed. Grand River Watershed Water Management Plan. Prepared by D. Boyd and S. Shifflett. Grand River Conservation Authority, Cambridge, ON. 2014. [https://www.grandriver.ca/en/our-watershed/resources/Documents/WMP/GRCA-Reservoir-Yield-Tech-Report-May2016\\_FINAL.pdf](https://www.grandriver.ca/en/our-watershed/resources/Documents/WMP/GRCA-Reservoir-Yield-Tech-Report-May2016_FINAL.pdf)
- Considerations for 'Securing' current and planned sources of municipal water supply. A discussion paper. Grand River Watershed Water Management Plan. Prepared by Lorrie Minshall for the Project Team, Grand River Conservation Authority, Cambridge, ON. 2013. [https://www.grandriver.ca/en/our-watershed/resources/Documents/WMP/Water\\_WMP\\_Report\\_MunicipalWater.pdf](https://www.grandriver.ca/en/our-watershed/resources/Documents/WMP/Water_WMP_Report_MunicipalWater.pdf)
- Cumulative Effects Assessment (Water Quality and Quantity) Best Practices Paper for Below-Water Sand and Gravel Extraction Operations in Priority Subwatersheds in the Grand River Watershed, prepared by Grand River Conservation Authority, September 2010. [https://www.grandriver.ca/en/Planning-Development/resources/Documents/Planning\\_AggregateBestPractices.pdf](https://www.grandriver.ca/en/Planning-Development/resources/Documents/Planning_AggregateBestPractices.pdf)
- Evaluation of Ecological Flow Assessment Techniques for Selected Streams in the Grand River Watershed, prepared by GRCA, Parish Geomorphic, Trout Unlimited Canada, University of Guelph, and University of Waterloo, September 2005. (low resolution file attached, high resolution file available upon request)
- Establishing Environmental Flow Requirements SYNTHESIS REPORT – Conservation Ontario – 2005 prepared for the Ontario Ministry of the Environment. (low resolution file attached, high resolution file available upon request)
- Grand River Basin Water Management Study. Grand River Implementation Committee, Ontario Ministry of the Environment, 1982. [https://www.grandriver.ca/en/our-watershed/resources/Documents/Water\\_History\\_1982BasinStudy.pdf](https://www.grandriver.ca/en/our-watershed/resources/Documents/Water_History_1982BasinStudy.pdf)

It is important to recognize that historically MECP played an active role in water supply planning since the Ministry operated municipal water supplies under the Ontario Water Resources Commission. Historical water planning documents provide important contextual information, particularly in the Grand River watershed where municipal supplies are dependent on both surface water and groundwater sources and the river also receives treated effluent from sewage treatment plants. An updated provincial water quantity framework should be adaptable to local water management infrastructure and challenges.

In locations where an area based framework is implemented, a review and assembly of historical water management documents relevant to that area should be undertaken so these documents are discoverable by technical reviewers at the MECP, providing the reviewer full context of water management considerations in a given area.

The following are Grand River Conservation Authority Comments on each of the identified goals.

**Goal 1: Establish clear provincial priorities of water use**

The GRCA supports amending the Water Taking and Transfer Regulation (Ontario Regulation 387/04) to identify priorities of water use. Establishing priorities of water use in regulation provides increased clarity and is a better concept for fair sharing of water than the currently used “first come first served” principle, specifically in areas where there may be water constraints or conflict.

Specifically, GRCA supports that water for the environment and drinking water is given equal weight as the highest priority water use, with an allowance for future water needs and a changing climate. However, consideration will have to be given as to how conflicts for competing needs within the same category would be resolved; e.g., a proposed new drinking water taking from shallow groundwater that may result in reduced base flow in surface water. There are also questions about how agricultural irrigation will be balanced with environmental needs in sensitive areas, and how environmental water requirements will be defined, specifically for groundwater. Considerations will need to be given to surface water and groundwater interactions, specifically preserving groundwater discharges to maintain important habitats (upwelling) and river baseflows. To identify and manage impacts to groundwater discharge or upwellings, aquifer based areas of assessment and management may need to be considered.

Similarly, how will conflicts between increased municipal use for commercial / industrial needs be balanced with commercial / industrial needs not on municipal water?

Municipal water supplies normally support a large percentage of commercial and industrial uses in addition to drinking water, and the same uses may be captured under category 1 and category 2 depending on the source of water.

GRCA supports the priorities of use be applied to new water taking applications and applications for renewed permits for increased takings. Renewals for the same water taking amount should be exempt from the new priorities of use criteria, unless an area based analysis is completed that demonstrates a review of renewals should consider new technical information.

Key stakeholders, including conservation authorities and municipalities, should be involved in a consultative process when creating the area based water quantity management framework. Conservation authority involvement should be at the area based assessment level so the MECP as the regulator has the necessary information. Individual PTTW application involvement by a conservation authority should be in key watershed areas, such as where Tier 3 Water Budget studies have been completed (e.g., within WHPA-Q). Criteria on which PTTW applications would be circulated for input to conservation authorities should be identified through the creation of the area based assessment framework. With respect to regulated reaches of a river downstream of large multipurpose reservoirs, the area assessment should include permits drawing water from the regulated reach of the river.

GRCA supports municipal drinking water needs as a highest priority category for current, planned, and longer-term growth; specifically, completed Environmental Assessments such as WSMPs identifying longer-term municipal water supply needs must be considered by the MECP when making PTTW decisions. Specific direction to that effect must be included in regulation.

It will be important to align the priorities established in regulation with the priorities used for managing water takings as part of Ontario's Low Water Response Program. GRCA encourages the MECP to work with MNRF to better coordinate the programs for more consistent implementation across the Province. GRCA also encourages the categories of priority of water use be included in the PTTW to allow for quick decision making and actions during drought conditions. Proactive water management planning is preferred to avoid the need to react through the low water response program.

**Goal 2: Update our approach to managing water takings in stressed areas**

The GRCA supports enhancing the existing authority in subsection 4(2) of the regulation to add explicit direction for Permit to Take Water Directors to consider the effects of a group of water takings on water availability and ecosystems within an area. Clear

direction in the regulation is required to more specifically define where cumulative assessment is necessary. Direction as to when to complete and apply an area based assessment should be within the regulation to provide clarity to both applicants and stakeholders during the permitting process. Staff at GRCA are willing to participate in pilot studies or provide advice to MECP as the province develops approaches to manage and plan water use in pre-existing stressed areas.

Area assessments are required in situations where multiple water takers are drawing from the same or interconnected water sources and in areas already defined as stressed or water limited. Under the Source Water Protection program, many areas of stress were defined throughout the province based on water availability, water use and environmental water requirements. Some of these areas have water quantity risk areas (WHPA-Q, IPZ-Q) defined as a result of Tier 3 water budget studies, although these water quantity risk areas were focused on municipal supplies only. Other areas were assessed at the subwatershed level (Tier 2 water budget studies) and include areas under stress for a variety of reasons including non-municipal water use, low water availability and high environmental water needs. Water Budgets from the Source Water Protection program are a good starting point to define areas that should be managed on an area basis. Additional work is required to update water budget components and better assess environmental water needs.

Detailed groundwater models have been developed in these areas. Examples in the Lake Erie Source Protection Region include the Region of Waterloo, City of Guelph and Township of Guelph/Eramosa, Township of Centre Wellington, Whitemans Creek, and Long Point Region Tier 3 water budget models. Where the information exists, consideration should be given to aquifer based area assessment, where the aquifer defines the area and a water balance can be completed on an aquifer basis to manage water takings from a given aquifer. Newly developed information, such as information contained in the Tier 3 models hold the potential to approach managing water takings differently.

The Ministry of Natural Resources and Forestry is working on the acquisition of additional topographic and bathymetric LiDAR across the province. The LiDAR base information will compliment future environmental flow assessments and hydraulic modeling of environmental flow thresholds. The LiDAR information will provide a portion of the based information required by hydraulic environmental flow models like the United States Army Corps of Engineers Ecosystem Functions Model (HEC-EFM). <https://www.hec.usace.army.mil/software/hec-efm/>

In addition to subwatershed based assessments, assessments within watersheds where surface water flows are managed by dams and reservoirs should be also carried out to ensure water takings are sustainable. These assessments need to include input from all dam operators on a system or river and take into account dam operating strategies and water management plans. Takings from both surface water and groundwater feeding baseflows should be considered when assessing flow regulated watercourses.

Area based assessments will require multi-stakeholder involvement from local areas. The MECP should utilize established multi-stakeholder water management groups for their knowledge of local water quantity issues. Established water management groups could include Low Water Response Teams, watershed Water Managers groups, and Source Water Protection Committees, among others. Most of these groups are connected via conservation authorities in many of the water stressed areas of the province. Conservation Authorities could play a role in bringing multi-stakeholders together within the area assessment process.

The province should consider how opportunities could be created to allow and facilitate local area knowledge transfer between CA and municipal staff and MECP technical reviewers and how knowledge developed as part of source water protection studies can be incorporated into technical reviews of PTTW.

The GRCA supports the MECP coordinating with the MNRF to better align the Ontario Low Water Response Program with the Water Taking regulations and ensuring roles and responsibilities are clearly articulated in respect to drought response. This will strengthen drought response in the province, which has suffered from conflicting responsibilities between ministries and other stakeholders in the past.

To better prepare water users for drought, proactive drought planning should be included within the stress assessment area studies and some flexibility built into water taking permits to make it easier to utilize less drought susceptible sources or to access communal water sources during a drought. Barriers to permitting a backup well or onsite storage ponds should be reduced so that best practices can be adopted as part of proactive planning.

### **Goal 3: Make water taking data more accessible**

The GRCA supports open available access to Provincial water quantity and monitoring information and further recognizes and supports the ministry's commitment to meet this goal within two years of amending the regulations.

All water data and information should be made publicly available in a format that is readily accessible unless the release of such data contravenes Provincial or Municipal Freedom of Information Protection of Privacy legislation.

Consideration should be given to data that may not be easily understandable or could be easily misunderstood by the public (i.e., water held back in a dam reservoir on a daily basis by a Conservation Authority is reported as a “water taking”; during a flood these volumes are large and could be misconstrued). Appropriate guidelines for use of the data and metadata will be important.

What is useful to a Conservation Authority is Provincial water data that is timely, well documented and available through web services. This will require an architected solution that is not too dissimilar from the Province's Kisters Water Information System. The Provincial Kisters Water Information System is capable of accepting, housing and distributing water use information using modern web services approaches and could accomplish the desired outcome of making data more readily available and discoverable. An example of how permitted water use data can be used locally is the Water Use Inventory Report for the Grand River Watershed, 2011 ([https://www.grandriver.ca/en/our-watershed/resources/Documents/Water\\_Supplies\\_WaterUse\\_2011.pdf](https://www.grandriver.ca/en/our-watershed/resources/Documents/Water_Supplies_WaterUse_2011.pdf))

“How would you like to see water quantity data presented” and “what data” are important questions. Answers to these questions should be guided primarily by availability of water related data that is collected by the Province and its various Ministries. The task of making ‘partner data’ available should only be contemplated once the task of making Provincial water data available is complete. The complexities of making other organizations’ data available in a portal, for example, will bog the process down. Alternatively, the Province may want to consider a web services solution whereby the partner data is held and maintained at the source by the data custodian and is consumed by a Provincial data portal via web services in real-time. This would ensure that the most relevant and most up-to-date partner data is available to the public and other users. The province should avoid aggregating data using a quarterly or annual bulk upload schedule as this will cause confusion. A move towards more real-time collection and distribution of water use information would be beneficial to the low water response program.

Sharing water data would be a tremendous step forward for the Province. Data and documents should not be just viewable, but also downloadable. Data can be presented in any number of ways and its presentation should be guided by engaging the various audiences for the information. Regardless of how it is presented, data should be made available in its digital form and complete with metadata. The data being contemplated



here is of marginal value unless it is accompanied with comprehensive metadata in order that users of data can make informed decisions on the suitability of the data for the intended use.

In addition to the data, guidance and reports to support monitoring data should also be provided to provide a frame of reference for how to use, and appropriateness of use of, the data.

#### **Goal 4: Give host municipalities more input into water bottling decisions**

GRCA agrees that decisions on water taking applications should be based on science. The responsibility to gather the necessary scientific information and oversee the scientific assessment about potential impacts of a proposed water taking should remain with the MECP. In many cases, municipalities may not have the scientific information available to provide evidence that a proposed water bottling application may impact the aquatic ecosystem, or water quality.

GRCA agrees that water availability, including current or future municipal water supply and environmental needs, must be considered by the MECP when making PTTW decisions. Recognizing completed Environmental Assessments such as WSMPs in the PTTW decision making process is a key consideration and should be included in regulation.

It is not clear why a proposed water taking for water bottling purposes would be the only water use category where a municipal resolution would be required in support of a PTTW application. BluMetric's findings confirm that water takings for water bottling purposes in most cases only comprise a small amount of the overall water takings in an area. If needed at all, a requirement for a municipal resolution should include all applications for large proposed water takings. Decisions regarding water takings should be science based and remain with the regulatory authority MECP.

The currently provided definition of a "host municipality" is also problematic, as it may not refer to the municipality with the affected water utility or nearby municipal wells. E.g., The Township of Puslinch (Wellington County), which does not own a municipal drinking water supply, would be considered the "host municipality" for a water taking application by Nestle (soon to be Ice River) at its Aberfoyle plant, but is close to City of Guelph water supply wells and within the Guelph-Guelph/Eramosa Wellhead Protection Area Quantity (WHPA-Q). In any two tier system such as the Region of Waterloo, the regional government is responsible for water supply, but the lower-tier municipalities would be considered the "host municipality". Should a decision be made to pursue this proposal, the MECP should consider defining "host municipality" as the municipality with

the authority to pass by-laws respecting water production, treatment and storage under the Municipal Act.